WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

image sensing means which includes a first element array having a plurality of photoelectric conversion elements arranged in a line, and a second element array shifted from the first element array by a predetermined distance in a main scanning direction and having a plurality of photoelectric conversion elements arranged in a line, and outputs signals of the first and second element arrays from a single output portion; and

driving means having a first mode of reading signals from the second element array and continuously outputting the signals from the output portion, and a second mode of reading signals from the first element array and continuously outputting the signals from the output portion.

2. The apparatus according to claim 1, wherein said driving means alternately repeats the first and second modes.

3. The apparatus according to claim 1, wherein said driving means includes operation of alternately repeating the first and second modes and operation of continuously performing the first or second mode.

4. The apparatus according to claim 1, further comprising:

a light source for irradiating an original with

light or making light pass through the original; and

imaging means for forming light reflected by the original into an image on said image sensing means while scanning light reflected by the original.

5. The apparatus according to claim 4, further comprising:

analog gain control means for controlling an analog gain of a signal output from said image sensing means; and

an analog/digital converter for digitizing the signal controlled by said analog gain control means.

6. The apparatus according to claim 5, further comprising shading correction means for performing shading correction for the digitized signal.

7. An image processing apparatus comprising:

image sensing means which includes a first element array having a plurality of photoelectric conversion elements arranged in a line, and a second element array shifted from the first element array by a predetermined distance in a main scanning direction and having a plurality of photoelectric conversion elements arranged in a line, and outputs signals of the first and second element arrays from a single output portion; and

driving means for outputting signals from one of the first and second element arrays and resetting signals from the other element array in the output

portion.

8. The apparatus according to claim 7, wherein said driving means alternately transfers signals from the first and second element arrays to the output portion, resets the signals from the second element array in the output portion, and continuously and sequentially outputs the signals of the first element array from the output portion.

9. The apparatus according to claim 7, further comprising:

a light source for irradiating an original with light or making light pass through the original; and

imaging means for forming light reflected by the original into an image on said image sensing means while scanning light reflected by the original.

10. The apparatus according to claim 9, further comprising:

analog gain control means for controlling an analog gain of a signal output from said image sensing means; and

an analog/digital converter for digitizing the signal controlled by said analog gain control means.

11. The apparatus according to claim 10, further comprising shading correction means for performing shading correction for the digitized signal.

12. An image processing apparatus comprising:

a first element array having a plurality of

photoelectric conversion elements arranged in a line;

a second element array shifted from said first element array by a predetermined distance in a main scanning direction and having a plurality of photoelectric conversion elements arranged in a line;

a first shift register for transferring signals from said first element array;

a second shift register for transferring signals from said second element array; and

an input unit for receiving at least three pulses having different phases and supplying the pulses to said first and second shift registers.

13. The apparatus according to claim 12, wherein said transfer means transfers the signals by using at least three pulses having different phases.

14. The apparatus according to claim 12, further comprising driving means for inputting at least pulses having different phases to said input unit and performing control to add signals from adjacent elements together in said shift register.

15. The apparatus according to claim 12, wherein two pulses having different phases are input to said input unit to output signals from said first and second element arrays without addition.

16. The apparatus according to claim 12, wherein at least three pulses having different phases are input to said input unit to perform control to add signals from

adjacent elements in said shift register, and two pulses having different phases are input to said input unit to output signals from said first and second pixel arrays without addition.

17. The apparatus according to claim 12, further comprising:

a light source for irradiating an original with light or making light pass through the original; and

imaging means for forming light reflected by the original into an image on said image sensing means while scanning light reflected by the original.

18. The apparatus according to claim 17, further comprising:

analog gain control means for controlling an analog gain of a signal output from said image sensing means; and

an analog/digital converter for digitizing the signal controlled by said analog gain control means.

19. The apparatus according to claim 18, further comprising shading correction means for performing shading correction for the digitized signal.

20. A processing method for an image processing apparatus including a first element array having a plurality of photoelectric conversion elements arranged in a line, a second element array shifted from the first element array by a predetermined distance in a main scanning direction and having a plurality of

photoelectric conversion elements arranged in a line, and output means for outputting signals of the first and second element arrays from a single output portion, comprising the step of reading signals from the second element array and continuously outputting the signals from the output portion or reading signals from the first element array and continuously outputting the signals from the output portion.

21. A processing method for an image processing apparatus including a first element array having a plurality of photoelectric conversion elements arranged in a line, a second element array shifted from the first element array by a predetermined distance in a main scanning direction and having a plurality of photoelectric conversion elements arranged in a line, and output means for outputting signals of the first and second element arrays from a single output portion, comprising the step of outputting signals sent from one of the first and second element arrays from the output portion, and resetting signals from the other element array in the output portion.

22. A processing method for an image processing apparatus including a first element array having a plurality of photoelectric conversion elements arranged in a line, and a second element array shifted from the first element array by a predetermined distance in a main scanning direction and having a plurality of

photoelectric conversion elements arranged in a line, comprising the step of transferring signals from the first and second element arrays in accordance with at least three pulses.